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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,653	11/12/2003	Shaun Kazuo Wakumoto	200313912-1	7013

22879 7590 11/28/2007  
HEWLETT PACKARD COMPANY  
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INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER
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ZAIDI, SYED

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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11/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/706,653

Applicant(s)

WAKUMOTO ET AL.

Examiner

Syed Zaidi

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-11 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Response to Arguments

Applicant's arguments filed August 29, 2007 have been fully considered but they are moot, with respect to the rejection of claims 1-13. In view of new grounds of rejection been presented in this office action as such may response to applicant's argument is moot.

Claims 1, 9, 11 and 13 have been amended.

Claims 8 and 12 have been cancelled.

### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1- 7 and 9-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bare.** (U.S. Patent # 6,947,384 B2) in further view of **Augart.** (U.S. Patent Number 6,778,524 B1).

**Consider claim 1, Bare.** discloses and shows a method of automated path tracing from an original mesh switch (column 9 lines 15-20, figure # 1) through a switching mesh to a specified destination (column 9 lines 15-20, figure # 1) the method comprising, building a mesh trace route packet to the specified destination (column 9 lines 44-47, figure # 1) transmitting the mesh trace route packet via an exit port associated with the specified destination (column 12 lines 33-48, figure # 16) and receiving the mesh trace route packet as returned (column 12 lines 44-58, figure # 16) wherein the mesh trace route packet as returned includes a plurality of hop entries providing a path trace from the original mesh switch through the switching mesh to the specified destination. However **Bare.** fails to each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port.

In the same field of endeavor, **Augart.** show and disclose each hop entry including a hop media access (MAC) address a hop in-

port, and a hop out-port (column 7 lines 13-20, column 8 lines 48-55, figure # 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port as taught by **Augart.** in the method of **Bare** to allow data access in the event of route failures.

**Consider claim 2**, as applied to claim 1 above, **Bare.** and as modified by **Augart.** and as modified by **Augart.**, clearly shows and discloses the method, wherein the specified destination comprises a search MAC address (a MAC address for tracing route) and VLAN identifier (column 12 lines 33-48, figure #)23, 29, 30).

**Consider claim 3** as applied to claim 1 above, **Bare** and as modified by **Augart.** clearly shows and discloses the method, further comprising, determining whether a trace complete flag (sequence number flag) in the returned packet is set (column 37 lines 6-47); and out putting results from a completed mesh traceroute if the trace

complete flag is set and if a trace found flag is set. However **Bare.** fails to completed mesh traceroute if the trace complete flag is set and if a trace found flag is set.

In the same field of endeavor, **Augart.** show and disclose each completed mesh traceroute if the trace complete flag is set and if a trace found flag is set. (column 7 lines 50-65, figure # 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the completed mesh trace route if the trace complete flag is set and if a trace found flag is set as taught by **Augart.** in the method of **Bare** to allow data access in the event of mesh trace route flag as described by **Bare.** in the cited passage.

**Consider claim 4,** as applied to claim 3 above, **Bare** and as modified by **Augart.** and clearly shows and discloses the method that generate an error message, if the trace complete flag is clear if failure is indicated by another flag (switch query error message) (column 21 lines 55-60, figure # 8).

Consider claim 5, as applied to claim 1 above, **Bare** and as modified by **Augart.** clearly shows and discloses the method, further comprising: receiving the mesh trace route packet at a hop mesh switch (column 48 lines 19-54) appending a hop entry to the mesh trace route packet and forwarding the packet via a hop out-port to a next mesh switch. However **Bare.** fails to completed hop entry to the mesh trace route packet and forwarding the packet via a hop out-port to a next mesh switch.

In the same field of endeavor, **Augart.** shows and discloses hop entry to the mesh trace route packet and forwarding the packet via a hop out-port to a next mesh switch (column 8 lines 47-65, figure # 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate hop entry to the mesh trace route packet and forwarding the packet via a hop out-port to a next mesh switch as taught by **Augart.** in the method of **Bare.** to allow data access in the event of route failures.



**Consider claim 6**, as applied to claim 5 above, **Bare** and as modified by **Augart**. clearly shows and discloses the method (column 12 lines 33-48 and figure # 1) further comprising: receiving the mesh trace route packet at a destination mesh switch (column 8 lines 16-19 and figure # 29) appending a final hop entry to the mesh trace route packet marking a trace complete flag and sending the packet back towards the original mesh (known as a looping) switch. However **Bare**. fails to each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port.

In the same field of endeavor, **Augart**. shows and discloses each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port (column 3 lines 65-67, column 4 lines 1-28, figure # 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port as taught by **Augart**. in the method of **Bare**. to allow data access in the event of (MAC) address a hop in-port, and a hop out-port.

**Consider claim 7**, as applied to claim 1 above, **Bare** and as modified by **Augart**. clearly shows and discloses the method, wherein the packet is sent back towards the original mesh switch by way of a reverse trace path (column 9 lines 15-21, and figure # 1).

**Consider claim 9**, **Bare** a switching device configured to be a member of a switching mesh, the switching device comprising: a plurality of ports (column 11 lines 18-34 and figure # 32) and a switch control device coupled to the plurality of ports (column 5 lines 20-30 and figure # 2, 3) wherein the switch control device is configured to perform an automated method of tracing a path through the switching mesh to a specified destination (column 12 lines 33-48 and figure # 32) wherein the automated method is accomplished by building a mesh trace route packet to the specified destination (column 11 lines 21-34 and figure # 32) transmitting the mesh trace route packet from an exit port associated with the specified destination (column 12 lines 1-3 and figure # 32), and receiving the mesh trace route packet as returned via the same port,

wherein the mesh trace route packet as returned includes a plurality of hop entries providing a path trace from the original mesh switch through the switching mesh to the specified destination, each hop entry including a hop media access (MAC) address, a hop in-port, and a hop out-port. However **Bare.** fails to each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port.

In the same field of endeavor, **Augart.** shows and discloses each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port (column 3 lines 65-67, column 4 lines 1-28, figure # 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port as taught by **Augart.** in the method of **Bare.** to allow data access in the event of routing loops failures.

**Consider claim 10**, as applied to claim 9 above, **Bare** and as modified by **Augart.** clearly shows and discloses the method,

wherein the specified destination comprises a search MAC address (MAC address for tracing route as specified by the applicant) and VLAN identifier (column 6 lines 23-58, column 12 lines 33-48, figure # 23, 29, 30).

**Consider claim, 11, Bare.** clearly shows and discloses a method of responding to receipt of a mesh trace route packet during an automated path tracing, the method comprising (column 11 lines 28-33 and figure # 32) receiving the mesh trace route packet at a mesh switch; and if the mesh switch is determined to comprise a hop mesh switch, then appending a hop entry to the mesh trace route packet (column 11 lines 51-67 and figure # 32, wherein the hop entry includes at least a hop media access (MAC) address, a hop in-port, and a hop out-port, and forwarding the packet via the hop out-port to a next mesh switch. However **Bare.** fails to each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port.

In the same field of endeavor, **Augart.** shows and discloses each hop entry including a hop media access (MAC) address a hop

in-port, and a hop out-port (column 7 lines 13-20, column 8 lines 48-55, figure # 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port as taught by **Augart.** in the method of **Bare** to allow hop access in the event of route failures.

**Consider claim 13, Bare** and as applied to claim 11 above, clearly shows and discloses the method, further comprising: if the mesh switch is determined to comprise a destination mesh switch[[:]], then filling in at least a hop in-port in the hop entry[[:]], marking a trace complete flag[[:]], and returning the packet towards the original mesh switch via the hop in-port. However **Bare.** fails to each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port.

In the same field of endeavor, **Augart.** shows and discloses each hop entry including a hop media access (MAC) address a hop

in-port, and a hop out-port (column 7 lines 13-20, column 8 lines 48-55, figure # 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the each hop entry including a hop media access (MAC) address a hop in-port, and a hop out-port as taught by **Augart**. in the method of **Bare** to allow data access in the event of drive failures as described by **Bare**. in the cited passage.

### Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Eriksson**. (US Pub #2005/0013297 A1) discloses an control system and communication systems that make it possible to transport traffic in connection-oriented mode using the network infrastructure and hardware of a traditionally connectionless network. **Yu Shaohua** (US Patent # 7,031,341 B2) discloses an interfacing apparatus and method for adopting Ethernet directly to physical channel.

Any response to this Office Action should be **faxed to** (571)

**273-8300 or mailed to:**

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P.O. Box 1450  
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**Hand-delivered responses** should be brought to

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Syed Zaidi whose telephone number is (571) 270-1779. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are

Unsuccessful, the Examiner's supervisor, Seema S. Rao can be reached on (571) 270-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Syed S. Zaidi*

Syed Zaidi  
S.Z/sz  
November 15, 2007.

*Seema S. Rao*  
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